



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First Named

Inventor : Joel W. Pfister

Appln. No. : 10/750,707

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Title : ARTICULATED MOUNT

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Group Art Unit: 3632

Examiner: Amy Jo Sterling

DECLARATION OF JOEL PFISTER UNDER 37 C.F.R. 1.132

Commissioner For Patents
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SENT VIA EXPRESS MAIL
Express Mail No.:

I, Joel Pfister, state:

1. I am an inventor of the invention described in U.S. Patent Application No. 10/750,707. I have over twenty years of experience in the area of industrial design, and particularly the design of mechanical devices.
2. I have reviewed U.S. Patent No. 3,409,315 issued to L. Wichers, et al. ("Wichers").
3. The invention disclosed in Wichers relates to a swivel joint that can carry large loads, such as a lighting fixture, on relatively long arms to allow the user to adjust the relative position of the arms, and hence the fixture, and then maintain that relative position of the arms.
4. Wichers creates its swivel joint 12 between first and second rods 18 and 20. The swivel joint 12 is created by capturing the central member 24 between first and second shell-like members 58 and 92, respectively.
5. Frictional forces of the swivel joint 12 between the first and second rods 18 and 20 are provided by a pair of outwardly or exterior extending frusto-conical surfaces 32 and 86 engaging a pair of complementary internal frusto-conical surfaces 66 and 88, respectively. A coil or expansion type of spring 42 is captured between the outwardly or exterior extending conical surfaces 32 and 86 to bias and urge the exterior extending conical surfaces 32 and 86 apart and into firm frictional engagement with their complimentary

surfaces 66 and 88, respectively. The frictional force will restrain or maintain the selected angular position of the swivel joint 12.

6. Additionally, the tapered bore of Wichers is not shown or disclosed as part of a bushing, but rather the interior tapered surface 66 is integrally formed as part of the first shell-like member 58.
7. The swivel joint 12 is held together by fastening element 72, which includes a smooth rod-like portion 104 that terminates in a step down shoulder 106 from which threaded portion 70 extends. Fastening element 72 passes through aperture 98 (of second shell-like member 92), aperture 84 (of bearing member 50), aperture 36 (of central member 24), and is received and threaded into internally threaded recess 68 (of first shell-like member 58).
8. Wichers shows in FIG. 4 and discloses that the fastening element 72 is threaded into internally threaded recess 68 until the step down shoulder 106 abuts or bottoms out against the lower end 108 of internally threaded recess 68. ('315 patent 5:42-49).
9. Wichers further discloses that fastening element 72 may alternatively comprise a permanent rivet as equivalent fastening means. ('315 patent 5:49-55).
10. Wichers discloses throughout the '315 patent that the bias or compressive force between the tapered surfaces 32 and 66 as well as 86 and 88 that create the frictional forces therebetween is provided by the coil spring 42.
11. As a result, the frictional forces or drag created between the tapered surfaces 32 and 66 as well as 86 and 88 in Wichers is created, generated, or established by the compression of coil spring 42. The amount of drag or friction between the respective tapered surfaces in Wichers is therefore constant due to the consistent tension provided by the coil spring 42 and is determined by the rating of the coil spring 42. Once compressed, coil spring 42 will provide a substantially constant outward tension.
12. Wichers does not disclose, suggest, or even address the ability to adjust the amount of drag or frictional force between the tapered surfaces 32 and 66 as well as 86 and 88. In

Wichers, the drag or frictional force between the tapered surfaces is adjusted by selecting a different coil spring 42 having a different compression rating.

13. Un-threading, loosening, or backing fastening element 72 some distance out of internally threaded recess 68 is not disclosed or suggested in Wichers. Such action would not provide any appreciable adjustment to the drag or frictional force between the tapered surfaces until the fastening element 72 was un-threaded, loosened, or backed out of internally threaded recess 68 sufficiently far to no longer compress coil spring 42. However, Wichers is unlikely to operate properly if fastening element 72 was loosened to such an extent because ears 52 of bearing member 50 would unseat from notches 48 and thus no longer provide drag, or oppose rotational movement between tapered surfaces 86 and 88 or prevent relative rotation between bearing member 50 and protrusion 30.
14. Additionally, adjusting the amount of drag or frictional force between the tapered surfaces is contrary to the invention disclosed in Wichers. Wichers is designed to provide an amount of drag or frictional force between tapered surfaces to allow relative movement between two arms yet the relative position of the arms once they are positioned is then maintained. Or stated another way, the drag or frictional force in Wichers is not so great that the arms are prevented from being moved relative to one another, but the drag or frictional force is large enough that the relative position of the arms is maintained. Wichers is directed at providing a sufficient drag or frictional force in that range and then once obtained, maintaining that drag or frictional force. Adjusting the drag between the tapered surface is inconsistent with Wichers' invention disclosed in the '315 patent and is not shown, disclosed, or suggested by Wichers.
15. Loosening fastening means 72 would also create the undesirable effect of gaps between the first and second shell-like members 58 and 92 as well as central member 24 that is to be clamped therebetween. The gaps would be created by the outward axial force provided by compressed coil spring 42.
16. Wichers discloses a swivel joint that allows one arm carrying a heavy load to be repositioned with respect to another arm and then to maintain that position without any

further action required by the user. While Wichers may use tapered surfaces to create the drag or frictional force necessary to accomplish the invention, there is no disclosure or suggestion to provide the ability to vary or adjust the amount of drag or friction between the tapered surfaces and such a feature would be contrary or counter to the purpose of the invention disclosed in Wichers.

I declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.



Joel Pfister

Date: JAN 13, 2006